



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION VIII  
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May Apply

May 15, 1997

**MEMORANDUM**

To: HQ Bevill-Knowledgeable Folks  
From: Chuck Figur  
Subject: Bevill Related Questions on Wastestreams at Asarco's Lead Smelter  
in East Helena, Montana

Attached is a set of questions related to various wastestreams generated and/or managed at Asarco's lead smelter in East Helena, Montana. Peter Moore suggested that I put them together prior to a meeting he is scheduling for the first week of June. The Asarco litigation team appreciates your input on these issues and your attendance at these meetings. The decisions made at that meeting will significantly impact the course of our litigation of the RCRA issues at that plant.

I apologize for not perfecting the questions, but felt it was more important to get them to you so that you can get an understanding of the Region's concerns and needs as early as possible before the meeting. I also hope that I have not left out any major wastestreams.

Once again, thanks for your attention to these issues. Please feel free to contact me at (303) 312-6915 if you have any questions. The technical lead for RCRA enforcement at the East Helena facility is Susan Zazzali. If you have any questions for her, she can be reached at (406) 441-1130 x226, upon her return to the office next Wednesday.

Copy: Susan Zazzali, 8MO  
Peter Moore  
Andy Hudock  
Mike Goodstein, DOJ  
Steve Sisk, NEIC

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ATTACHMENT TO MEMO DATED MAY 15, 1997

QUESTIONS TO BE USED (AT LEAST IN PART) TO DEVELOP CONCLUSIONS  
ON THE REGULATORY STATUS OF CERTAIN WASTE STREAMS

May 15, 1997

General Question(s): What documents or other evidence provide the basis for answers to each of the following questions?

What statutory or regulatory citations, federal register ("FR") preamble, guidance or other documents, are relied on, and can be cited to support the answers to each of the following questions?

I. ACID PLANT BLOWDOWN ("APB")

- A. What are all of the process(es) and/or unit(s) which comprise an "acid plant" at a primary lead smelting facility?
1. What goes into each process and/or unit?
  2. What comes out of each process and/or unit? Where does it go? Which of these are APB?
  3. Are there any other places at a primary lead smelter where APB is, may be, or may have been generated? If yes:
    - a. Name the specific unit/process, and any larger system it may be a part of. If it is part of a larger system, describe the system.
    - b. Describe what goes into and comes out of such unit/process.
- B. What is the Agency's understanding of the character of each APB wastestream generally (liquid, semi-solid, sludge; pH; other characteristics, including constituents)?
- C. Is the acid plant a pollution control device ("PCD")? (See 54 FR 15327, 2nd col.; and EPA's brief in Solite which says metallurgical acid plants produce sulfuric acid as a by-product of the smelter's air pollution control system (citing to 49 FR 8748).)

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1. If acid plants are PCD's, which unit(s) receive inputs which are "pollution"?
  2. Are any inputs mineral beneficiation or processing wastes? Were they at any earlier time? Were they ever, and are they now, excluded from subtitle C under the federal scheme?
  3. Is the acid plant (PCD) "beneficiating", or "processing" the inputs? Which unit(s)?
  4. Is APB an "aqueous waste stream" ("AWS") from the PCD? (If APB is not an AWS from a PCD, what is it?)
  5. Are all, or some of the acid plant outputs "sludge" (40 C.F.R. § 260.10)?
- D. Is APB from acid plants at lead smelters "uniquely associated"? (as meant in the 1980 preamble)? How?
1. The 10/20/88 FR (table 3) does not list APB from primary lead smelters, but does list copper and zinc smelters. ("Therefore, EPA believes that it has correctly and unambiguously identified the wastes that were of concern to Congress when it enacted the Bevill amendment, and has, at the same time, presented explicit criteria that will enable members of the regulated community and the public to evaluate whether any additional wastes should be added to the list in Table 3 for the continued regulatory exclusion and study provided by the Bevill amendment.") The 4/17/89 and 9/1/89 FRs do.<sup>1</sup> We appear to have become convinced that APB from primary lead smelters was uniquely associated during this time period. (Survey and related documents? Anything else?)
    - a. Explain the difference between acid plants at lead smelters and other acid plants, such as those treating molten sulfur.
- E. Assuming, for the moment, that APB was Bevill excluded and still is because of the status of the authorized State program: what is the Bevill status of the outputs resulting from the treatment, or other management, of APB?
1. Does it matter when the treatment units or processes began to be used?

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"Wastes proposed for withdrawal from the Bevill Exclusion . . . 2. Acid plant blowdown from primary lead processing" (4/17 FR p. 15342) Fails low hazard. Category "wastes for which current data support a proposed exclusion decision." References Appendix 1.

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2. Does it matter whether successive units, or processes, manage the stream(s)?  
Does it matter what happens in those units?

II. PLANT WATER

- A. The 9/25/89 FR states "Process wastewater is generated at many points in the smelting and refining of lead, and, for purposes of this rule, includes waters generated by slag or space granulation, contact cooling, and at some plants, neutralized acid plant blowdown effluent. This waste stream does not, however, include wastewaters from upstream beneficiation operations such as sintering. Industry sources have indicated that solids are settled out and the water is reused."

app 5

1. Which plants? We must find out so that we can do an accurate analysis of exempted process water and potentially non-exempt wastewaters added.
2. What is "neutralized acid plant blowdown effluent"? Is this the effluent from the unit in which neutralizing of APB is done? Is "effluent" separate from sludges and other wastes?
3. Why is APB a separate wastestream from process wastewater, but neutralized APB effluent is not? ("[D]istinctions . . . are appropriate based on the available information concerning the waste characteristics and points of generation in the process." 1/23/90 FR (55 FR 2322 p.??)) (Solite says okay to separate APB from process wastewater.)
5. What regulatory difference would it make if process wastewater included wastewater from sintering?
  - a. Same question for wastestreams from "managed" sinter wastewater.
  - b. Has the answer to these questions changed over time?
4. Why would neutralized ~~APB~~ effluent be uniquely associated if other generators of acidic wastes neutralize ~~their~~ wastestreams too?

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6. Did industry tell us that the solids that were settled out are what we meant to cover with our K065 listing? Did industry tell us (again) that they recycled (smelted) 100% of these solids?<sup>2</sup>
  7. Did industry tell us that the water was "reused" at at least one facility by trucking it all over the facility and spraying it around for dust suppression, etc.?
- B. The dreaded mixture rule question (sorry!). But at least we can assume that all hazardous wastes in these questions are characteristic.
1. From January 1, 1992 through the present, what is the regulatory status of a mixture of process water with characteristic waste in an authorized state that has not been authorized for any Bevill processing waste rules?
    - a. Does it matter whether the characteristics in the hazardous waste is/are the same as the constituents we would find in the process water; does it matter whether they're above or below TC?
    - b. What about the mixing of multiple characteristic wastestreams with process wastewater?

**III. VARIOUS REFRACTORY BRICK**

- A. How did furnace brick (for copper, lead, etc.) get on Table 1 for the 4/17, 1989, FR (p. 15343)? Was it "nominated"? Did it get in from the Survey?
- B. Did EPA ever explain in a preamble why brick was not mentioned in September 1, 1989 rule (Table 2, p. 36631)?
- C. How did furnace brick (phosphorous and lead, but not copper) get on table in Exhibit 1 of discussion of LDRs for ex-Bevills in October 24, 1991, FR preamble (p. 55184).
- D. Is the analysis in the May 11, 1994, letter to Mr. Sygo (Michigan DNR) from Mike Shapiro (9441.1994(11)), and in the memo dated April 12, 1996, from Richard Kinch, to

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<sup>2</sup>. Now that we have withdrawn the K065 listing one generator of such waste has told us that it is no longer feasible to smelt ("recycle") the sludges. In fact, they want us to designate a CAMU for their most recent batch of "ex-K065" (generated during a CERCLA clean-up pursuant to a ROD (as of now the ROD requires smelting)) and for other plant soils.

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Mr. Tuma (Michigan DEQ) the analysis for all refractory brick? Are there any other letters, memos, public writings to that effect (especially earlier)?

1. How are we addressing the Nebraska interpretation?

IV. GENERAL

- A. Have we identified individual hazardous wastes which are generated at "primary lead smelters" which were never Bevill? In what document(s)?
- B. Hypotheticals: A facility adds (1) 42 tons of hazardous waste (manifested to the facility as such); or (2) large amounts of characteristic refractory brick, to the feedstock of its primary lead smelter.
  1. Is the otherwise Bevill-excluded slag generated during the smelting of either of these of hazardous waste(s) Subtitle C hazardous?
  2. If the slag from the smelting of that hazardous waste is now hazardous waste, and it is added to the giant otherwise Bevill-excluded slag pile, and cannot be found and/or segregated, is the entire slag pile hazardous?

50 % at Seed  
89 Rule + Proposal discussion

Cypress Miami  
takes in 25%  
gall Food  
(BIF permitted)

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East Helena RCRA Proposed Penalty Calculation 9-18-97

	Gravity	Economic Benefit
Plant Water 5k + (972d x 2k)	\$1,949,000	0
Bricks 5k + (900d x 1.8k)	\$1,625,000	\$2,000,000 bldg \$ 889,000 permit
Stainless Slag 5k + (150d x 1.8k)	\$275,000	"
Spent Carbon 5k + (180d x 1.5k)	\$275,000	"
Soils 5k + (730d x 1.5k)	\$1,110,000	65,839
Filter Cake	\$10,000	0
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	\$5,244,000	\$2,954,839

Total Penalty: \$8,198,839

TABLE 1. ASARCO DISCHARGE FLOWS TO POTW BMR

Stream Name	Legal Status/ 40 CFR Part 421	*Avg. Flow from Source (gpd)	**Avg. Flow to HDS Plant (gpd)
Respirator Wash (1)	Regulated/421.75	153	141
Laundry Wash (2)	Regulated/421.75	2,361	2,172
Handwash (3)	Regulated/421.75	316	291
Facility Washdown (4)	Regulated/421.75	3,000	2,760
Acid Scrubber Blowdown (5)	Regulated/Subpart I	8,640	8,640
Showers (6)	Unregulated	5,760	5,300
Storm Water (7)	Unregulated	4,320	3,975
Lower Lake (8)	Unregulated	100,800	100,800
Acid Plant Transfer Sump (9)	Dilute	21,600	19,875
Boiler Blowdown (10)	Dilute	50	46
Total Regulated Flow	421.75	5,830	5,364
Total Regulated Flow	Subpart I	8,640	8,640
Total Unregulated Flow		110,880	110,075
Total Dilute Flow		21,650	19,921
Total Flow		147,000	144,000

Footnotes: (Refer to Appendix A for flow calculations)

- 1 Respirator wash flow is based on volume of sinks and number of times sinks are filled per week divided by 7.
- 2 Laundry flow is based on water usage of each machine and number of loads washed per week divided by 7.
- 3 Because some handwash is currently discharged to the sanitary sewer, HDS handwash flow was prorated using the maximum categorical limit for lead smelters, handwash monitoring data reported by Asarco (Asarco, 1993), and the total site handwash flow (estimated). See Appendix A for further explanation.
- 4 Facility washdown flow is based on the measured flow from the washdown hose, time the hose is used and the number of washdowns per day.
- 5 Acid scrubber blowdown flow is based on a 1991 plant site water balance (Asarco, 1991).
- 6 Shower flow was calculated by subtraction of handwash, boiler blowdown, laundry, and respirator wash from the total changehouse flow of 6 gpm.
- 7 Storm water flow was calculated by subtraction of known flows that enter the plant water system from the measured total flow leaving this system.
- 8 Lower Lake flow was calculated from the difference in HDS capacity and all other flows to HDS plant.
- 9 Acid plant transfer sump flow is based on actual measurements made during 1991 site water balance (Asarco, 1991).
- 10 Boiler blowdown flow is based on the measured flow per blowdown.

\* Initial discharge flows from each source.

\*\*Fraction of flows which enter HDS Treatment Plant at page 3.

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OPTIONAL FORM 99 (7-90)

### FAX TRANSMITTAL

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